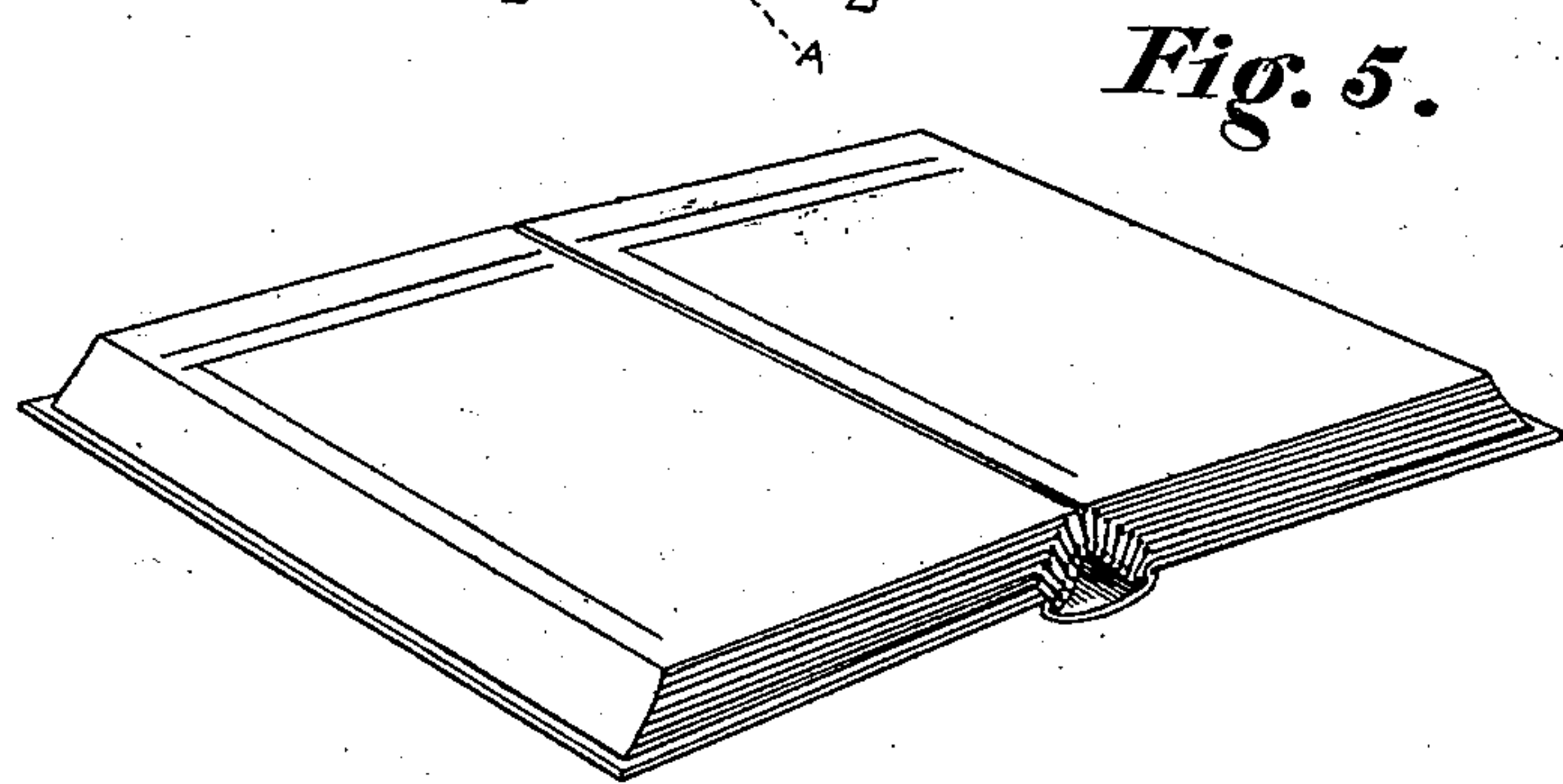
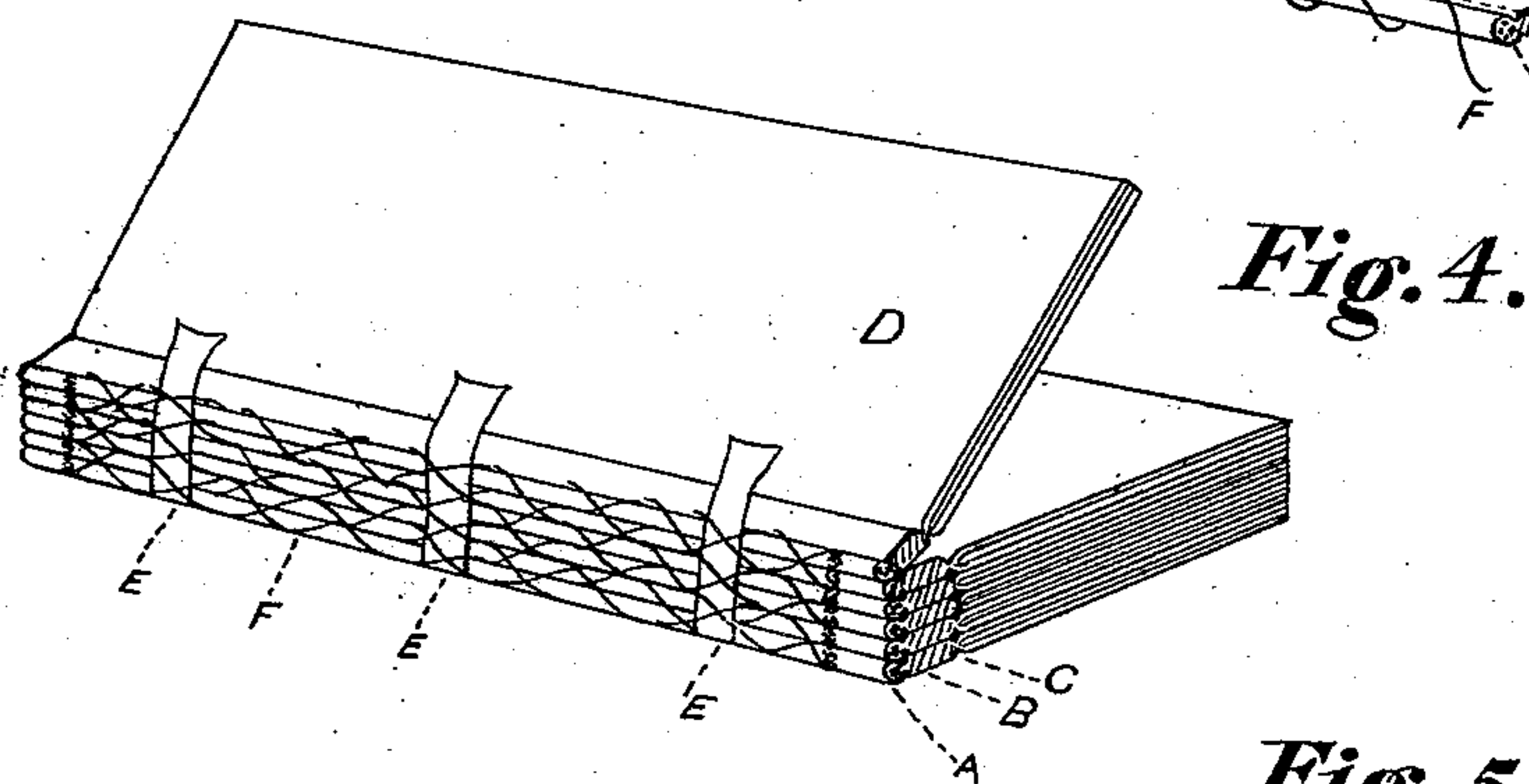
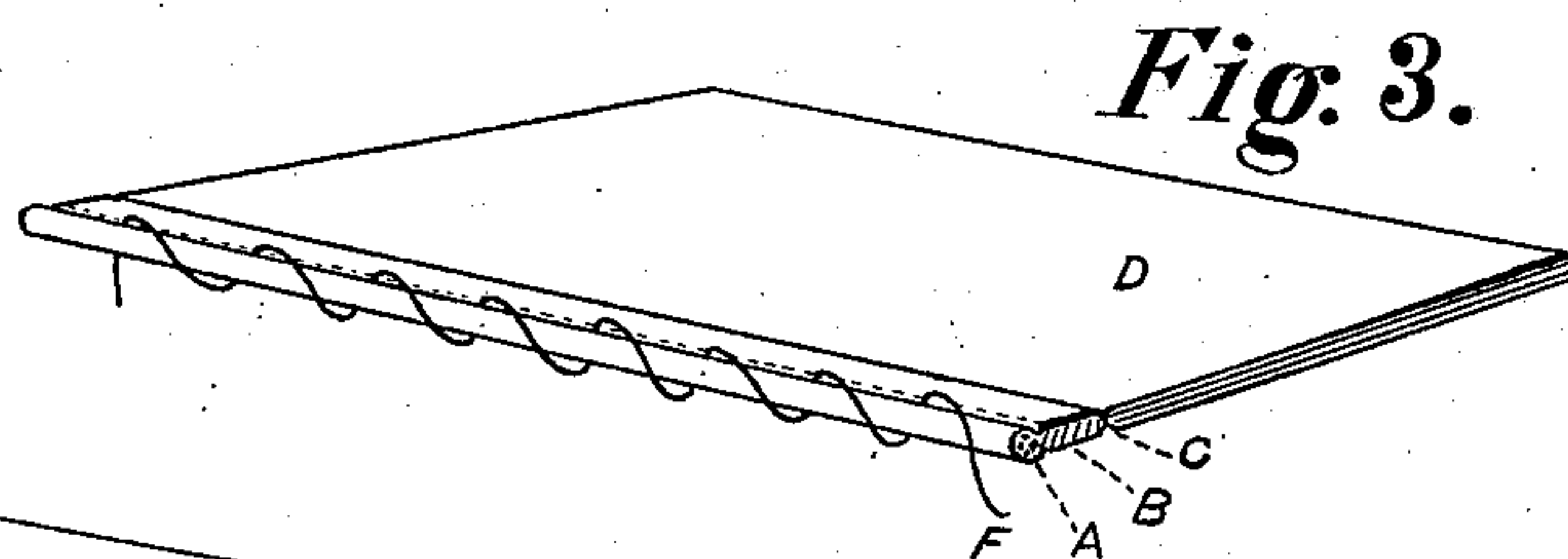
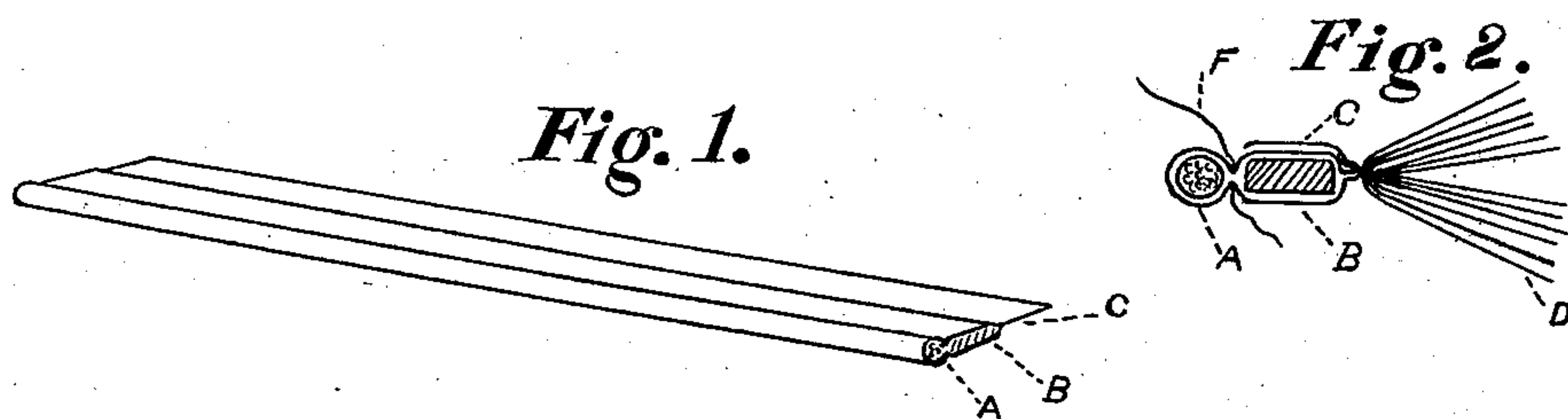


(No Model.)

J. W. HANNEN.  
BLANK BOOK.

No. 506,634.

Patented Oct. 10, 1893.



WITNESSES:

*G. W. Rea,*  
*Robert Everett.*

INVENTOR

*John W. Hannen.*

BY

*Edward Taggart.*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

JOHN W. HANNEN, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF ONE-HALF  
TO EDWIN B. SEYMOUR, OF SAME PLACE.

## BLANK BOOK.

SPECIFICATION forming part of Letters Patent No. 506,634, dated October 10, 1893.

Application filed June 8, 1893. Serial No. 476,974. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. HANNEN, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Blank Books, of which the following is a specification.

My invention relates to a new and useful construction in blank books, and the invention consists in a single stub or guard forming a double flexible hinge containing a retaining strip and a filling strip, of solid or other material, and a flexible fabric wound around the strips so as to form a double hinge, and stitched to the section or signature of the book as hereinafter shown and described.

The objects of my invention are, first, to produce a substantial and cheap binding for flat opening blank books; and, second, to form a cheap method of attaching the sections to the double hinge by means of a flexible fabric stitched to the section, while one end of the fabric is loose from the filling strip; the loose end of the fabric being attached by means of glue or other suitable means after the stitching has been accomplished. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure (1) represents a perspective view of my double hinge with a portion of the fabric wound around and secured to the retaining strip and the filling strip with spaces between each, and a portion extended in order to illustrate the hinge and flexible fabric in condition to be attached to the section or signature. Fig. (2) is an end view, with a section or signature attached, and with the free end of the flexible fabric turned back into position to be attached to the flexible hinge. Fig. (3) is a perspective view of a complete hinge attached to a section or signature with the thread shown in position for attaching together the several sections in order to form a book. Fig. (4) is a perspective view of several sections attached together with the strips in position to attach the paper with the hinges to the cover; and, Fig. (5) is a perspective view of a blank book constructed in accordance with my invention.

Similar letters refer to similar parts throughout the several views.

A represents the retaining strip, B the filling strip and C the flexible fabric which surrounds the two strips and forms with the strips and the sections the double flexible hinge. 55

D represents the leaves forming the signature or section.

E represents the strips which bind the several sections to the cover of the book.

F represents the thread or cord which attaches the sections together. The fabric B is wound so as to inclose or encircle the strips A and B, and is preferably attached so that when the hinge is completed and before it is attached to the signature, it presents the appearance shown in Fig. (1) with the free end of the flexible fabric extending. The extended portion shown in the upper part of Fig. (1) is sewed through and through to the signature or section D, the threads passing through as one seam to the inner side of the filling strip B. The free end of the flexible fabric is then turned back as shown in Fig. (1) and finally pressed down and glued or otherwise attached to the hinge so as to assume the appearance shown in Figs. (3) and (4). Each section D with a double hinge is completed as shown in Fig. (3) and then a plurality of these sections so completed with the double hinge, are placed together as shown in Fig. (4) and attached by means of the cord or thread F passing between the retaining strip A and the filling strip B. When the sections are attached together, they present the appearance shown in Fig. (4). By this construction the book will open flat as shown in Fig. (5), the hinge being a perfect hinge between the retaining strip A and B and a perfect hinge between the filling strip B and the section or signature D. 80

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is— 90

1. In a blank book, the combination of a retaining strip and filling strip, and flexible fabric wound or wrapped around the retaining strip and filling strip and secured thereto, and a section or signature stitched to the fabric through one end thereof, the end of the fabric turned back, and attached to the hinge proper, substantially as above described. 95 100

2. The combination of a flexible fabric, a retaining strip and a filling strip enwrapped

and secured to and by said flexible fabric;  
and signature or section attached to the flexi-  
ble fabric by the thread or cord passing  
through one end of said section, said stitched  
5 end of the fabric turned back, and attached  
by glue or other suitable means to the body  
of the hinge, substantially as described.

3. A series of flexible hinges, each con-  
structed as above described and attached to  
10 a section, a plurality of sections stitched to-

gether by means of stitches passing through  
between the retaining strip and the filling  
strip, the whole bound into a cover, substan-  
tially as and for the purpose set forth.

In witness whereof I have hereunto set my 15  
hand and seal in the presence of two witnesses.

JOHN W. HANNEN. [L. S.]

Witnesses:

DENTON O. SPROAT,  
EDWARD TAGGART.